A defeat device is an auxiliary emission control device (AECD) that reduces the effectiveness of emission controls under conditions that the locomotive may reasonably be expected to encounter during normal operation and use.

(1) This does not apply to AECDs you identify in your application for certification if any of the following is true:

(i) The conditions of concern were substantially included in the applicable duty cycle test procedures described in subpart F of this part.

(ii) You show your design is necessary to prevent locomotive damage or accidents.

(iii) The reduced effectiveness applies only to starting the locomotive.

(iv) The locomotive emissions when the AECD is functioning are at or below the notch caps of §1033.101.

(2) This does not apply to AECDs related to hotel mode that conform to the specifications of this paragraph (f)(2). This provision is intended for AECDs that have the primary function of operating the engine at a different speed than would be done to generate the same propulsive power when not operating in hotel mode. Identify and describe these AECDs in your application for certification. We may allow the AECDs to modify engine calibrations where we determine that such modifications are environmentally beneficial or needed for proper engine function. You must obtain preliminary approval under §1033.210 before incorporating such modifications. Otherwise, you must apply the same injection timing and intake air cooling strategies in hotel mode and non-hotel mode.

(g) *Idle controls.* All new locomotives must be equipped with automatic engine stop/start as described in this paragraph (g). All new locomotives must be designed to allow the engine(s) to be restarted at least six times per day without causing engine damage that would affect the expected interval between remanufacturing. Note that it is a violation of 40 CFR 1068.101(b)(1) to circumvent the provisions of this paragraph (g).

(1) Except as allowed by paragraph (g)(2) of this section, the stop/start systems must shut off the main locomotive engine(s) after 30 minutes of idling (or less).

(2) Stop/start systems may restart or continue idling for the following reasons:

(i) To prevent engine damage such as to prevent the engine coolant from freezing.

(ii) To maintain air pressure for brakes or starter system, or to recharge the locomotive battery.

(iii) To perform necessary maintenance.

(iv) To otherwise comply with federal regulations.

(3) You may ask to use alternate stop/start systems that will achieve equivalent idle control.

(4) See §1033.201 for provisions that allow you to obtain a separate certificate for idle controls.

(5) It is not considered circumvention to allow a locomotive to idle to heat or cool the cab, provided such heating or cooling is necessary.

(h) *Power meters.* Tier 1 and later locomotives must be equipped with MW-hr meters (or the equivalent) consistent with the specifications of §1033.140.

[73 FR 37197, June 30, 2008, as amended at 73 FR 59189, Oct. 8, 2008; 75 FR 22982, Apr. 30, 2010]

§1033.120 Emission-related warranty requirements.

(a) *General requirements.* Manufacturers/remanufacturers must warrant to the ultimate purchaser and each subsequent purchaser that the new locomotive, including all parts of its emission control system, meets two conditions:

(1) It is designed, built, and equipped so it conforms at the time of sale to the ultimate purchaser with the requirements of this part.

(2) It is free from defects in materials and workmanship that may keep it from meeting these requirements.

(b) *Warranty period.* Except as specified in this paragraph, the minimum warranty period is one-third of the useful life. Your emission-related warranty must be valid for at least as long as the minimum warranty periods listed in this paragraph (b) in MW-hrs of

operation (or miles for Tier 0 locomotives not equipped with MW-hr meters) and years, whichever comes first. You may offer an emission-related warranty more generous than we require. The emission-related warranty for the locomotive may not be shorter than any published warranty you offer without charge for the locomotive. Similarly, the emission-related warranty for any component may not be shorter than any published warranty you offer without charge for that component. If you provide an extended warranty to individual owners for any components covered in paragraph (c) of this section for an additional charge, your emission-related warranty must cover those components for those owners to the same degree. If the locomotive does not record MW-hrs, we base the warranty periods in this paragraph (b) only on years. The warranty period begins when the locomotive is placed into service, or back into service after remanufacture.

(c) *Components covered.* The emission-related warranty covers all components whose failure would increase a locomotive's emissions of any regulated pollutant. This includes components listed in 40 CFR part 1068, Appendix I, and components from any other system you develop to control emissions. The emission-related warranty covers the components you sell even if another company produces the component. Your emission-related warranty does not need to cover components whose failure would not increase a locomotive's emissions of any regulated pollutant. For remanufactured locomotives, your emission-related warranty is required to cover only those parts that you supply or those parts for which you specify allowable part manufacturers. It does not need to cover used parts that are not replaced during the remanufacture.

(d) *Limited applicability.* You may deny warranty claims under this section if the operator caused the problem through improper maintenance or use, as described in 40 CFR 1068.115.

(e) *Owners manual.* Describe in the owners manual the emission-related warranty provisions from this section that apply to the locomotive.

[73 FR 37197, June 30, 2008, as amended at 73 FR 59189, Oct. 8, 2008; 75 FR 22983, Apr. 30, 2010]

§ 1033.125 Maintenance instructions.

Give the owner of each new locomotive written instructions for properly maintaining and using the locomotive, including the emission-control system. Include in the instructions a notification that owners and operators must comply with the requirements of subpart I of this part 1033. The emission-related maintenance instructions also apply to any service accumulation on your emission-data locomotives, as described in §1033.245 and in 40 CFR part 1065. If you equip your locomotives with a diagnostic system that will detect significant malfunctions in their emission-control systems, specify the extent to which your emission-related maintenance instructions include such diagnostics.

§ 1033.130 Instructions for engine remanufacturing or engine installation.

(a) If you do not complete assembly of the new locomotive (such as selling a kit that allows someone else to remanufacture a locomotive under your certificate), give the assembler instructions for completing assembly consistent with the requirements of this part. Include all information necessary to ensure that the locomotive will be assembled in its certified configuration.

(b) Make sure these instructions have the following information:

(1) Include the heading: ''Emission-related assembly instructions''

(2) Describe any instructions necessary to make sure the assembled locomotive will operate according to design specifications in your application for certification.

(3) Describe how to properly label the locomotive. This will generally include instructions to remove and destroy the previous Engine Emission Control Information label.

(4) State one of the following as applicable: